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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/727,324	11/30/2000	Michael Bennett Freeman	99-100	2279

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EXAMINER
SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
1714	7

DATE MAILED: 08/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

mk-7

Office Action Summary	Application No.	Applicant(s)	
	09/727,324	FREEMAN ET AL.	
	Examiner	Art Unit	
	Callie E. Shosho	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 April 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. All outstanding rejections, except for those described below, are overcome by applicants' amendment filed 4/26/02.

The new grounds of rejection as set forth in paragraphs 7-8 below are necessitated by applicants' amendment and thus, the following action is final.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As set forth in paragraph 2(b) of the office action mailed 1/28/02, claims 5 and 8 each recite an improper Markush group. In claim 5, line 9, it is suggested that after "vinylsulfonate", "and" is deleted and replaced with a comma, and "or" is changed to "and" while in claim 8, it is suggested that "and" is inserted after "methacrylamides" and before "substituted" in line 4.

Claim Rejections - 35 USC § 102

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1 and 3-9 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 590604.

The rejection is adequately set forth in paragraph 7 of the office action mailed 1/28/02, Paper No. 5, and is incorporated here by reference.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1 and 3-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 867484 in view of Farwaha et al. (U.S. 5,959,024).

EP 867484 disclose an ink jet ink comprising a polymer obtained from (meth)acrylates and 1-10% acid component such as (meth)acrylic acid, itaconic acid, and maleic acid and wherein the polymer has average particle diameter of 5-400 nm and glass transition temperature (Tg) of less than 30^0 C. It is further disclosed that the polymer is in the form of an emulsion. Additionally, since the polymer is used to strongly fix the colorant present in the ink to substrate, it is clear that the polymer functions as a binder (page 3, lines 32-33 and 58, page 4, lines 1-2, 22-23, and 49-57, and page 5, lines 7-9 and 41-43).

The difference between EP 867484 and the present invention is the requirement in the claims of particle size distribution of the polymer.

Farwaha et al., which is drawn to the use of acrylic latex, disclose that a polymer possessing a narrow particle size distribution results in a coating with much better gloss and further that the smaller the average particle size, i.e. less than 500 nm, the more water resistant

the polymer and that such small particle size is achieved by using a polymer with a narrow particle size distribution (col.2, lines 36-40 and col.7, lines 58-67).

In light of the motivation for using an acrylic polymer with narrow particle size distribution disclosed by Farwaha et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use polymer with narrow particle size distribution including that presently claimed, in EP 867484 in order to produce a composition with improved gloss and water resistance, and thereby arrive at the claimed invention.

8. Claims 1 and 3-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horii et al. (U.S. 5,662,778) in view of Farwaha et al. (U.S. 5,959,024).

Horii et al. disclose a binder obtained form (meth)acrylates and acid component such as (meth)acrylic acid, crotonic acid, and maleic acid wherein the binder has glass transition temperature of -70^0 to 20^0 C and average particle size of 200-600 nm. Further, it is disclosed that the binder is in the form of an emulsion (col.4, lines 55-57, col.4, line 67-col.5, line 14, col.5, lines 52-53, and col.16, lines 14-16). Particular attention is drawn to col.13, line 39-col.14, line 5 which discloses a polymer which is obtained from 2% methacrylic acid and has Tg of -20^0 C and average particle size of 350 nm.

While there is no disclosure that the binder is an ink binder as presently claimed, applicants attention is drawn to MPEP 2111.02 which states that "if the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a

limitation and is of no significance to claim construction". Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the examiner's position that the preamble does not state any distinct definition of any of the claimed invention's limitations and further that the purpose or intended use, i.e. ink binder, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art Horii et al. and further that the prior art structure which is a polymer identical to that set forth in the present claims is capable of performing the recited purpose or intended use.

The difference between Horii et al. and the present claimed invention is the requirement in the claims of particle size distribution of the polymer.

Farwaha et al., which is drawn to the use of acrylic latex, disclose that a polymer possessing a narrow particle size distribution results in a coating with much better gloss and further that the smaller the average particle size, i.e. less than 500 nm, the more water resistant the polymer and that such small particle size is achieved by using a polymer with a narrow particle size distribution (col.2, lines 36-40 and col.7, lines 58-67).

In light of the motivation for using an acrylic polymer with narrow particle size distribution disclosed by Farwaha et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use polymer with narrow particle size distribution including

that presently claimed, in Horii et al. in order to produce a composition with improved gloss and water resistance, and thereby arrive at the claimed invention.

Response to Arguments

9. Applicants' arguments with respect to EP 455379 and EP 960919 have been considered but they are moot in view of the discontinuation of these references against the present claims.

10. Applicants' arguments filed 4/26/02 have been fully considered but, with the exception of arguments relating to EP 455379 and EP 960919, they are not persuasive.

Specifically, applicants argue that:

(a) EP 590604 does not disclose the present invention.

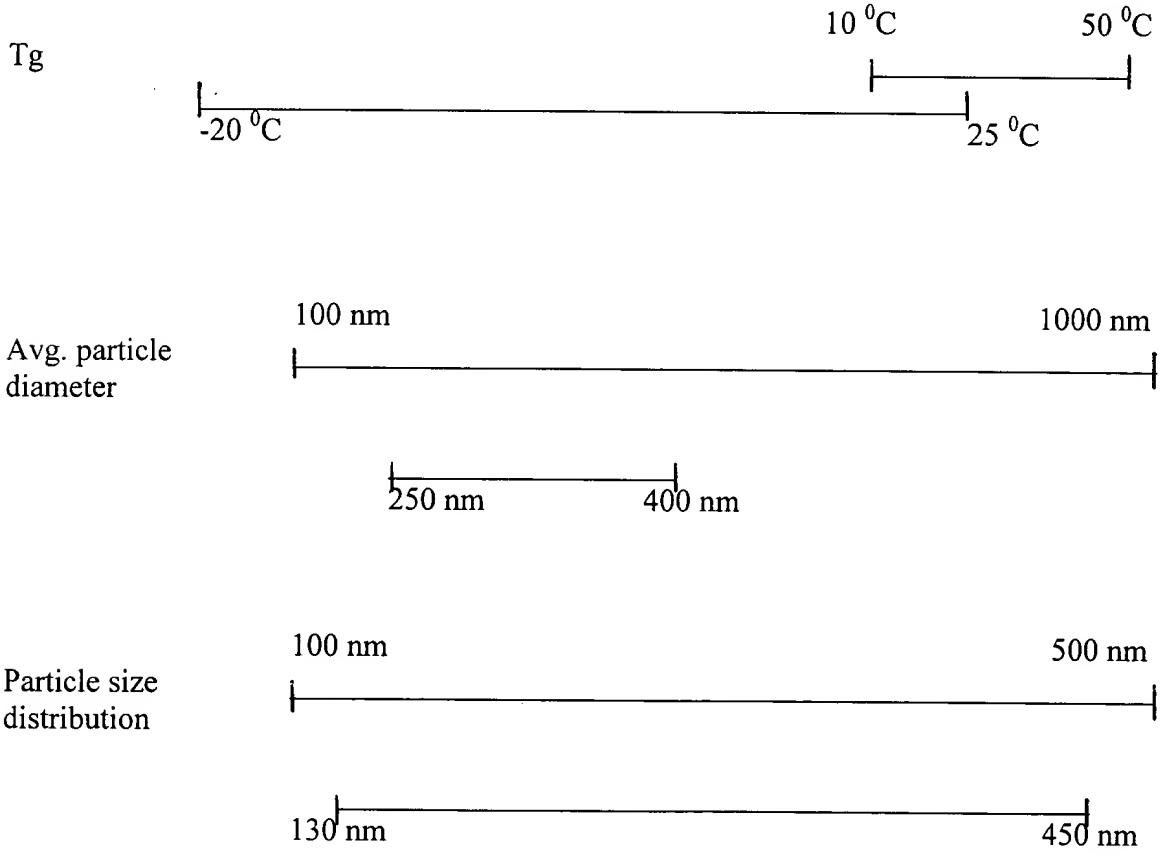
(b) EP 590604 is not drawn to inks.

(c) There is no motivation to combine either EP 867484 or Horii et al. with Farwaha et al.

With respect to difference (a), applicants argue that although EP 590604 disclose glass transition temperature (Tg), average particle diameter, and particle size distribution which overlap the Tg, average particle diameter, and particle size distribution presently claimed, "the disclosure of a broad chemical range does not constitute an anticipation of a specific range falling within in it". Further, applicants argue that the comparative data in the present specification establishes the improvement in wet rub smear resistance and highlighter resistance for inks made using a binder having Tg, average particle diameter, and particle size distribution as presently claimed.

However, as set forth in MPEP 21313.03, when the prior art teaches a range within, overlapping, or touching the claimed range, such range anticipates if it discloses the claimed range with "sufficient specificity".

It is the examiner's position that the reference does disclose the claimed invention with sufficient specificity. According to MPEP 2131.03, the "test" for lack of sufficient specificity arises when the reference range is relatively broad with respect to the claimed range. That, however, is not the case here as evidenced from the overlap in the ranges shown in the diagram below wherein the top line indicates the reference range and the bottom line the claimed range:



As can be seen, either the average particle diameter or the particle size distribution of EP 590604 is not unduly broad as compared to the claimed average particle diameter or particle size distribution presently claimed. Further, with respect to the Tg, given that the reference Tg is not relatively broad as compared to the claimed Tg, this property does not meet the "test" for lack of sufficient specificity as required in MPEP 2131.03.

Given that it is the examiner's position that the 35 USC 102 rejection with respect to EP 5901604 is proper, the comparative data as provided in the present specification is not successful in establishing unexpected or surprising results over EP 590604, given that EP 590604 already discloses invention identical to that presently claimed. As cited in MPEP 706.02(b), it is noted that a rejection based on 35 USC 102(b), such as EP 590604, can only be overcome by (a) persuasively arguing that the claims are patentably distinguishable from the prior art, (b) amending the claims to patentably distinguish over the prior art, or (c) perfecting priority under 35 USC 119(e) or 120. As can be seen, comparative data is not sufficient to overcome an anticipatory rejection under 102(b).

With respect to argument (b), it is agreed that EP 590604 is not drawn to inks. However, it is noted that claims 1-4 are drawn to polymer not ink composition. Further with respect to claims 5-9, while there is no disclosure that the copolymer of EP 590604 is an ink binder or useful as a binder in ink jet inks as presently claimed, applicants attention is drawn to MPEP 2111.02 which states that "if the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's

limitations, then the preamble is not considered a limitation and is of no significance to claim construction". Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the examiner's position that none of the preambles in the present claims state any distinct definition of any of the claimed invention's limitations and further that the purpose, i.e. ink binder, or intended use, i.e. useful as a binder in inkjet inks, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art EP 590604 and further that the prior art structure which is a polymer identical to that set forth in the present claims is capable of performing the recited purpose or intended use.

With respect to argument (c), applicants argue that Farwaha et al. is drawn to the use of saccharides as emulsion stabilizers during synthesis of acrylic latex not to binders for inks and further that Farwaha et al. fail to disclose properties attributable to inks. Applicants also argue that one skilled in the art would not look to Farwaha et al. in order to achieve superior ink binding properties, highlighter resistance, and reduced clogging for printer heads.

However, there is nothing in the claims regarding highlighter resistance or reduced clogging. Additionally, it is noted that present claims 1-4 are drawn to a polymeric binder only; there is no disclosure of inks or properties relating to inks.

Further, it is noted that note that while Farwaha et al. do not disclose all the features of the present claimed invention, note that Farwaha et al. is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely that acrylic latex binders (as presently claimed) with narrow particle size distributions have better gloss, and in combination with the primary reference, discloses the presently claimed invention. If the secondary reference contained all the features of the present claimed invention, it would be identical to the present claimed invention, and there would be no need for secondary references.

As stated above, Farwaha et al. is used to teach that it is advantageous to use acrylic polymer that possesses narrow particle size distribution. While there is no specific range associated with the particle size distribution, given that EP 867484 or Horii et al. disclose average particle diameter as presently claimed, if EP 867484 or Horii et al. use polymer wherein the particle size distribution is narrow, it is the examiner's position that the particle size distribution will also fall within the particle size distribution range as presently claimed.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

CS.

Callie Shosho
8/19/02

Vasu Jagannathan
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